APPENDIX 6B

Non-Potable Water Analysis

APPENDIX 6B
MID MEGS Project Non-Potable and Process Waste Water Analysis Estimate
PB Power Rev F 3/3/02

Constituent	Abbr	Units	Well #11 Non-Potable Water Analysis	Cooling Tower Blowdown @ 4.0 Cycles of Conc.	Water Treat Plant RO Reject @ 4.0 Cycles of Conc.	Sewer Discharge Avg. Analysis w/ Cooling in Operation (Typical Winter Case)	Sewer Discharge Avg. Analysis w/ Cooling Tower Off Line in Operation (Typical Winter Case)	Estimated Clarifier Effluent After Lime Softening Process
Average Flow Rate to Sewer		gpm		21	58	79	58	79
Total Hardness as CaCO3		mg/L	170	680	680	680	680	
Calcium	Ca	mg/L	47	188	188	188	188	30
Magnesium	Mg	mg/L	12	48	48	48	48	12
Sodium	Na	mg/L	60	240	240	240	240	240
Total Alkalinity as CaCO3		mg/L	200	800	800	800	800	
Bicarbonate	HCO3	mg/L	200	800	800	800	800	31
Sulfate	SO4	mg/L	28	112	112	112	112	158
Chloride	Cl	mg/L	26	104	104	104	104	104
Nitrate as NO3	NO3	mg/L	66	264	264	264	264	264
pH			7.9	9.1	8.0	8.3	8.0	7.5
Specific Conductance		umho/cm	560	2240	2240			
Total Dissolved Solids		mg/L	380	1520	1520	1520	1520	890
Silica as SiO3	SiO3	mg/L	29	116	116	116	116	102

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Turbidity		NTU	0.2	0.8	0.8	0.8	0.8	10
Cooling Tower Residual Chemicals:								
Hydroxyphosphonoacetic acid & Etheraminephosphonate	PO4	mg/L		6		1.6	0	
Sodium Tolytriazole	NaTTA	mg/L		2		0.5	0	
Carboxylic acid esters (polymer)	Polymer	mg/L		7		1.9	0	
Pyrenetetrasulfonic acid	PTSA	mg/L		1		0.3	0	
Bromine (Biocide Control):								
	HOBr	mg/L		0.10		0.03	0	
	OBr	mg/L		0.20		0.05	0	
Inorganics:								
Aluminum	Al	µg/L	ND					
Antimony		µg/L	ND					
Arsenic	As	µg/L	9	36	36	36	36	36
Barium	Ba	µg/L	87	348	348	348	348	348

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Beryllium			ND					
Boron	B	µg/L	100	400	400	400	400	400
Cadmium	Cd	µg/L	ND					
Chromium, hexavalent	CrVI	µg/L	ND					
Copper	Cu	µg/L	ND					
Iron	Fe	µg/L	ND					
Lead	Pb	µg/L	ND					
Manganese	Mn	µg/L	ND					
Mercury	Hg	µg/L	ND					
Nickel	Ni	µg/L	ND					
Thallium	Tl	µg/L	ND					
Vanadium	V	µg/L	38	152	152	152	152	152
Zinc	Zn	µg/L	ND					
Organics:								
Butachlor		µg/L	0.7	2.8	2.8	2.8	2.8	2.8
Metolachlor		µg/L	0.7	2.8	2.8	2.8	2.8	2.8